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RHODE ISLAND ARBOR DAY

FRIDAY

MAY 12TH

1922



The Requiem of the Leaves From etching by Earl H. Reed

R H O D E I S L A N D E D U C A T I O N C I R C U L A R S

THIRTY-FIRST ANNUAL PROGRAM

FOR THE

OBSERVANCE OF ARBOR DAY IN
THE SCHOOLS OF RHODE ISLAND

MAY 12, 1922

(Edition of 73,000)



Brook in Scituate.

THE COMMISSIONER OF EDUCATION

STATE EDUCATION SERVICE

RHODE ISLAND



THE SAILOR'S ELM

By this tree on the shore of Mount Hope Bay pilots steered their vessels.

State of Rhode Island
Public Education Service

COMMISSIONER'S ARBOR DAY MESSAGE

To the Boys and Girls of Rhode Island Schools:

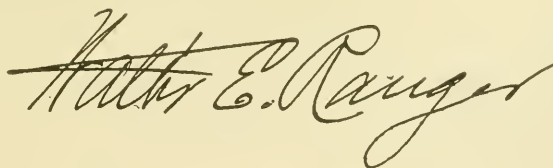
The object of Arbor Day is to promote the planting of trees and the best way to keep the day is to plant trees. The forests of our country have been a rich heritage of our people; but they have not been kept in trust, as they might have been, yielding constant revenues for future generations. Though much of our inheritance has been exhausted, it is not too late to attempt its restoration. Like our schools and roads, our public institutions and means of protection, maintained not only for ourselves but for coming generations, reforestation has become a great public interest, calling for new civic responsibility and general public support.

In the planting and care of trees, in learning their uses, their utility can hardly be separated from their truth and beauty and the goodness they teach. Trees are more than things for material use. Like all "green things growing," they minister to the human heart. All literatures show how they have enriched the life of man. In all ages a fruitful tree has been the symbol of a good man's life.

The schools no longer confine their lessons to truth stored in books; their doors are open to the outer world, and sunlit messages of the earth's truth and beauty from field and forest enter in. As our children receive the blessings of a fruitful earth, may they learn man's dependence on nature and the need of saving earth's bounty as a "kindness to future generations."

You keep your Arbor Day in "Maytime, the blossom time of the year." It becomes a festival of springtime, even like a celebration of Mother Nature's birthday. In place of the withered leaves of autumn are the fresh green leaves of a new spring. The trees have awakened. Plant and shrub bud and blossom. Grasses and flowers spring up everywhere.

"Everything is upward striving;
'Tis as easy now for the heart to be true
As for the grass to be green or skies to be blue,—
'Tis the natural way of living."



Commissioner of Education.

There are notes of joy from the hang-bird and wren
And the gossip of swallows, through all the sky;
The ground-squirrel gaily chirps by his den,
And the wilding bee hums merrily by.
There's a dance of leaves in that aspen bower,
There's a titter of winds in that beechen tree,
There's a smile on the fruit, and a smile on the flower,
And a laugh from the brook that runs to the sea.—Bryant.

And out of the ground made the Lord God to grow every tree that is pleasant to the sight, and good for food; the tree of life also in the midst of the garden, and the tree of knowledge of good and evil.—Genesis, xi—9.

SUGGESTIVE PROGRAM FOR ARBOR DAY, 1922

| | | |
|----------------------------------|-------------------------------|----------------------------------|
| CHORUS. | SCRIPTURE. | RECITATIONS. |
| SONG. | ESSAY—"Decorative Shrubbery." | ESSAY—"Quinsnicket Woods." SONG. |
| BRIEF REPORTS ON PLANTING TREES. | | |
| RECITATIONS. | SONG. | GROUP EXERCISES. |
| CHORUS. | PLANTING EXERCISES | |

ARBOR DAY

"Dear Arbor Day, your subjects loyal,
Give you greetings, hearty, royal."

The planter wends across the world,
And glad, beneath the shining sky
We wander forth, you and I.
And even in our hearts doth ring
This song of Spring! Spring.

—Paul Lawrence Dunbar.

"Mother Nature, hear our singing,
Take the praises we are bringing;
May they swell, forever ringing,
As on this Arbor Day."

Within the sun-lit forest,
Our roof the bright blue sky,
Where streamlets flow and wild flowers blow,
We lift our hearts on high.—Ebenezer Elliott.

MIRACLES

To-day I saw this lovely thing—
A maple tree a-burgeoning—

And, on the lawn so brown and bare,
Green grass upspringing here and there;

Tulips, that pushed their fragile heads
From stark and barren garden beds;

While all the Rambler roses show
Frail, tender buds in embryo.

Listen, and heed earth's glad refrain.
You, who are worn with grief and pain;

Cease for a while your sorrowing!
Come out, come out, and meet the Spring!
—Mazie V. Caruthers.

SELECTIONS FROM THE SCRIPTURES FOR ARBOR DAY

(Blessings of a Fruitful Earth.)

For as the earth bringeth forth her bud, and as the garden causeth the things that are sown in it to spring forth; so the Lord God will cause righteousness and praise to spring forth before all the nations.—*Isaiah, lxi:11.*

For the Lord shall comfort Zion: he will comfort all her waste places; and he will make her wilderness like Eden, and her desert like the garden of the Lord; joy and gladness shall be found therein, thanksgiving, and the voice of melody.—*Isaiah, li:3.*

When the poor and needy seek water, and there is none, and their tongue faileth for thirst, I the Lord will hear them, I the God of Israel will not forsake them.

I will open rivers in high places, and fountains in the midst of the valleys; I will make the wilderness a pool of water, and the dry land springs of water.

I will plant in the wilderness the cedar, the shittah tree, and the myrtle, and the oil tree; I will set in the desert the fir tree, and the pine, and the box tree together.—*Isaiah, xli:17-19.*

Because the palaces shall be forsaken; the multitude of the city shall be left; the forts and towers shall be for dens for ever, a joy of wild asses, a pasture of flocks.

Until the spirit be poured upon us from on high, and the wilderness be a fruitful field, and the fruitful field be counted for a forest.

Then judgment shall dwell in the wilderness, and righteousness shall be peace; and the effect of righteousness remain in the fruitful field.—*Isaiah, xxxii:14-16.*

For ye shall go out with joy, and be led forth with peace; the mountains and the hills shall break forth before you into singing, and all the trees of the field shall clap their hands.

Instead of the thorn shall come the fir tree, and instead of the brier shall come up the myrtle tree; and it shall be to the Lord for a name, for an everlasting sign that shall not be cut off.—*Isaiah, lv:12-13.*

SALUTE TO THE TREES

Many a tree is found in the wood
 And every tree for its use is good:
 Some for the strength of the gnarled root,
 Some for the sweetness of flower or fruit;
 Some for shelter against the storm,
 And some to keep the hearth-stone warm.
 Some for the roof, and some for the beam
 And some for a boat to breast the stream:—
 In the wealth of the wood since the world began,
 The trees have offered their gift to man.

But the glory of trees is more than their gifts:
 'Tis a beautiful wonder of life that lifts
 From a wrinkled seed in an earth-bound clod,
 A column, an arch in the temple of God,
 A pillar of power, a dome of delight,
 A shrine of song, and a joy of sight!
 Their roots are the nurses of rivers in birth,
 Their leaves are alive with the breath of the earth;
 They shelter the dwellings of man; and they bend
 O'er his grave with the look of a loving friend.

I have camped in the whispering forest of pines,
 I have slept in the shadow of olives and vines;
 In the knees of an oak, at the foot of a palm
 I have found good rest and slumber's balm.
 And now, when the morning gilds the boughs.
 Of the vaulted elm at the door of my house,
 I open the window and make salute:
 "God bless thy branches and feed thy root!
 Thou hast lived before, live after me,
 Thou ancient, friendly, faithful tree."

—Henry Van Dyke.

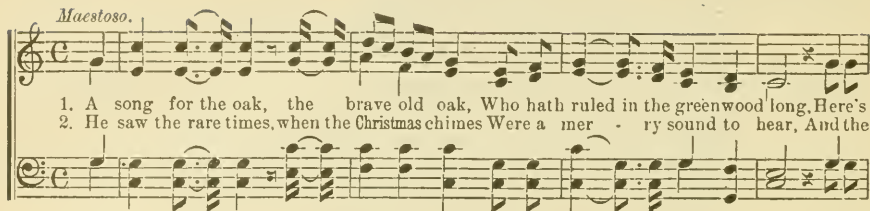
AN ANCIENT AND HONORED TREE

What is said to be the oldest tree in Europe is growing at Somma, Lombardoa, a small place about 30 miles from Milan. It is a cypress and is said to be 1,000 years old. Its girth is 18 feet and its shadow is 63 feet in diameter. When Napoleon was building the road from Simplon Pass to Milan, he ordered that the road be turned around the tree so that the latter should not be destroyed.
 —*Providence Journal*.

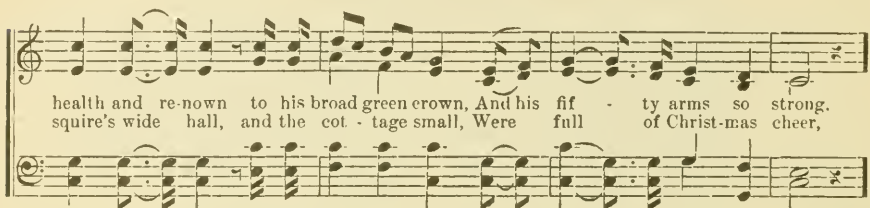
A people without children would face a hopeless future; a country without trees is almost as hopeless. Forests which are so used that they cannot renew themselves will soon vanish, and with them their benefits. A true forest is not merely a storehouse full of wood, but, as it were, a factory of wood, and at the same time a reservoir of water. When you help to preserve our forests or to plant new ones you are acting the part of good citizens.—*Theodore Roosevelt*.

"A person who has not had an intimate, friendly acquaintance with some special tree has missed something from life."—*Anna Botsford Comstock*.

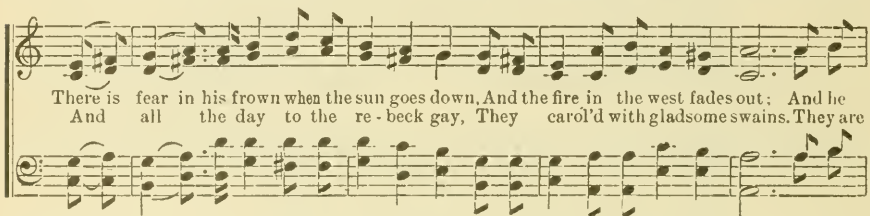
THE BRAVE OLD OAK

E. J. LODER
H. F. CHORLEY*Maestoso.*


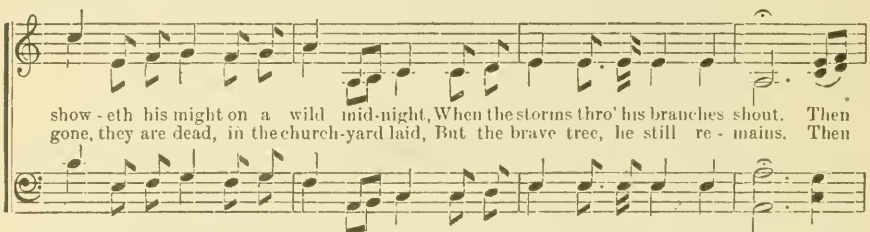
1. A song for the oak, the brave old oak, Who hath ruled in the greenwood long, Here's
2. He saw the rare times, when the Christmas chimes Were a merry sound to hear, And the



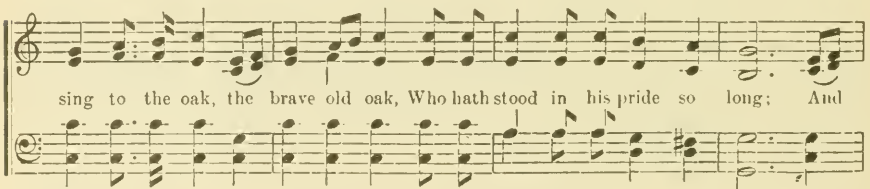
health and re-noun to his broad green crown, And his fifty arms so strong.
squire's wide hall, and the cottage small, Were full of Christ-mas cheer,



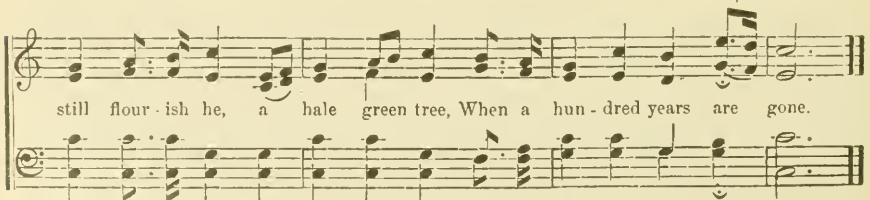
There is fear in his frown when the sun goes down, And the fire in the west fades out; And he
And all the day to the re-beck gay, They carol'd with gladsome swains. They are



show-eth his might on a wild mid-night, When the storms thro' his branches shout. Then
gone, they are dead, in the church-yard laid, But the brave tree, he still re-mains. Then



sing to the oak, the brave old oak, Who hath stood in his pride so long; And



still flourish he, a hale green tree, When a hundred years are gone.

CULTIVATED SHRUBS

Professor Marion Dodge Weston, Rhode Island College of Education

Have you ever made the acquaintance of the shrubs which help to make your community a place where people love to dwell? Of the many plant families which contribute generously to the beauty of the grounds about our homes and public buildings none deserves more praise than the Rose, the Honeysuckle and the Olive.

The great Rose family with its numerous useful as well as ornamental members is represented in almost every garden. Without stopping to catalogue the trees, which include most of our native fruits (apples, peaches and the like) as well as trees cultivated for their beauty alone, such as the Hawthorn, we find a long list of valuable shrubs: all kinds of roses, Japan Quince, Kerria, and the Spireas.

In the names of many of our cultivated shrubs we acknowledge our debt to Japan. The Japan Quince has long been a favorite in American gardens. Old-fashioned gardens sometimes contain small shrubs with deep yellow, double



High Bush Blackberry.

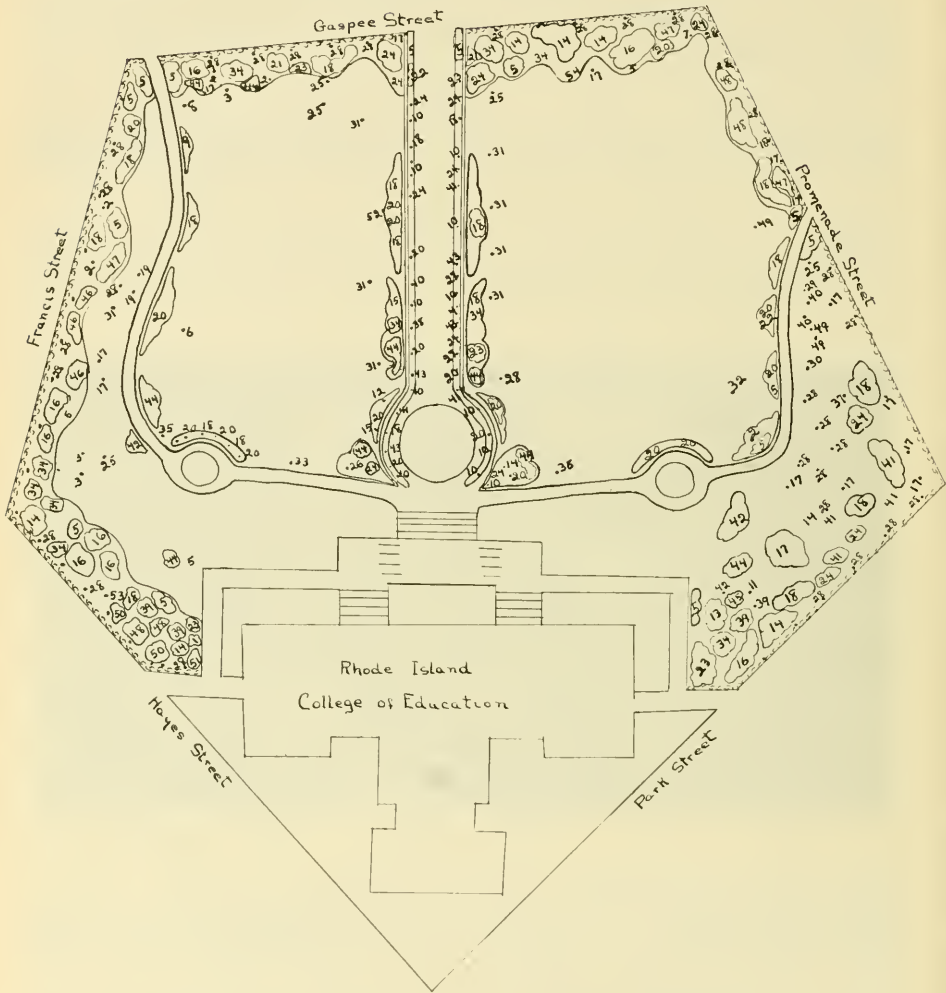
—Photo by H. Emerson Heyer.

flowers scattered among the sharply toothed leaves, the Yellow Kerria. In more recent years the single-flowered Kerria, also introduced from Japan, is being rather widely planted, an interesting example of a flower which is far more popular in its single than its double form. At all seasons of the year the bright green of the Kerria stems contrasts vividly with the more common browns and grays of the rest of the shrubbery.

Did you ever think of there being styles in shrubs as well as in clothes or furniture? At a time when it was the fashion to have double Kerrias people favored a Spiraea which is not often set out to-day, although it is very beautiful, the Plum-leaved Spiraea or Bridal Wreath. Its place is being taken by the more graceful Van Houtte's Spiraea which has become exceedingly popular because of its wand-like branches laden with masses of white blooms. Mrs. Keeler writes: "In bloom it stands like a great white fountain." The Ninebark is the largest of our Spiraeas. It is safe to call at least every other shrub with white blossoms a Spiraea.

Some shrubs become favorites because of their foliage, for example, the

TREES AND SHRUBS AT RHODE ISLAND COLLEGE OF EDUCATION



- | | | |
|--------------------------|----------------------------|--------------------------|
| 1 Acacia, Rose | 19 Hawthorn | 37 Pear |
| 2 Ailanthus | 20 Hydrangea | 38 Pepperbush, Sweet |
| 3 Ash, White | 21 Indigo, False | 39 Plum, Beach |
| 4 Azalea | 22 Kerria, Yellow-flowered | 40 Poplar, Carolina |
| 5 Barberry, Japanese | 23 Kerria, White-flowered | 41 Privet |
| 6 Beech, Purple | 24 Lilac | 42 Quince, Japan |
| 7 Birch, Gray | 25 Linden | 43 Rhododendron |
| 8 Birch, Weeping | 26 Locust, Honey | 44 Rose |
| 9 Calycanthus | 27 Magnolia | 45 Snowberry |
| 10 Cypress | 28 Maple, Norway | 46 Spirea, Plum-leaved |
| 11 Chestnut, Chinese | 29 Maple, Norway, (purple) | 47 Spirea, Van Houtte's |
| 12 Coffee Tree, Kentucky | 30 Maple, Red | 48 Sumac, Staghorn |
| 13 Coralberry | 31 Maple, Sugar | 49 Sycamore |
| 14 Cranberry, Bush | 32 Maple, White | 50 Syringa |
| 15 Deutzia | 33 Mulberry, Weeping | 51 Tartarian Honeysuckle |
| 16 Dogwood, Red-stemmed | 34 Ninebark | 52 Tulip Tree |
| 17 Elm | 35 Oak, English White | 53 Willow |
| 18 Forsythia | 36 Oak, Red | 54 Witherod |

Privet; many shrubs are prized for their blossoms, and a goodly number because of the beauty of their fruit. Many of the shrubs valued especially for their fruit are found in the Honeysuckle family. Two closely related forms, the Snowberry and the Coral-berry, have modest little flowers hidden among the leaves, flowers not showy enough to explain the fact that these two native shrubs are extensively cultivated. After the blooming season is over the Snowberry develops large white berries which remain beautiful for months. For many generations this shrub has been a treasured possession of the gardener. The Indian Currant or Coral-berry, with its long, slender branches weighed down by large numbers of deep red berries, is especially appreciated because the rich color of the berries is retained far into the winter.

Another shrub the berries of which remain brilliantly beautiful until the spring is the Bush Cranberry, one of the largest of our cultivated shrubs. In spring its white flowers are attractive but not as showy as those of its close relative, the Snowball. Although the Bush Cranberry is the most extensively cultivated of the wild Viburnums there are others which are most attractive. The color-



Mountain Laurel.

—Photo by H. Emerson Heyer.

changes in the berries of the Withe-rod are interesting to watch as the green becomes first pink and finally bluish black. Frequently all three colors with intermediate shades may show in the same cluster.

Very dear to New England homes are three shrubs belonging to the Olive family, the Forsythia, the Privet and the Lilac. Recent years have seen the Forsythia or Golden Bell reach a literally dazzling height of popularity. I wonder how many Forsythia shrubs were transformed into masses of golden splendor in Providence this spring. There are different kinds of Forsythia; not all have the graceful, trailing branches with which you are familiar. China has given the world many beautiful shrubs which have found congenial homes in Europe and America. Over one hundred years ago the Forsythia was carried to England and planted in the royal gardens at Kensington, where it was named in honor of the director, William Forsyth.

Rhode Island people have also given the Privet a very hearty welcome, although for a different reason. The Privet in flower is not a common sight

because this shrub has been used almost entirely in hedges where the blossom buds are removed by the severe pruning necessary to the shape of the hedge. The firm, dark green leaves, enduring cheerfully the dirt of city streets and remaining on the bush until beaten off by winter storms, make the Privet a splendid hedge plant. The Privet, however, when allowed to assume its natural shape will bloom into little lilac-like clusters of fragrant, creamy flowers, which later develop purple-black berries.

The Lilac has a story of its own. After its discovery over 300 years ago it was carried from Constantinople to Vienna and later across to England. In the survey of the royal gardens of Nonsuch, planted in the time of Henry VIII., there is mentioned a fountain "set round with six Lilac trees, which bear no fruit, but only a very pleasant smell." In 1652 the purple Lilac was growing happily about the homes of the early settlers in America. Out in the country to-day an old cellar hole guarded by clumps of lilac is a not uncommon sight. As the settlers moved westward the Lilac went with them, enduring faithfully the hardships of climate until the long periods of drouth made further progress impossible. Fashions in Lilacs may change, but the abundance of the pale purple varieties of the old-fashioned kind proves to us that after nearly 300 years of popularity it is still a favorite in New England.

Why not learn the names of the various shrubs as they blossom this spring? Watch the berries or dry fruits form as the flowers fade, in order that you may know the plants later on in the season. The last task is the hardest: be able to call them by name in the winter when flowers and leaves and perhaps even the fruit are not there to help you. Then you may truly say that you have made the acquaintance of our cultivated shrubs.

THE SONG OF THE WARBLER

There's a happy little warbler upon a cherry tree
And I hear him ere the sun is up singing songs to me.
He tells me strange and happy tales of Springtime now so near,
The happiest, busiest, sunniest time of all the glad new year.

"Look out upon the hillside there, and see the melting snow;
That winter's end is drawing near all creatures here must know.
Sweet perfumed little blossoms will hear the call of Spring.
And breaking forth their budded cells the rainbow's colors bring.

"The swallows left their southern homes a week or so at best,
And each will come to occupy his soft and downy nest.
I asked the dear old Sol to wake the little sleeping plant:
And begged the noisy water frogs to start their Springtime chant.

"The violet and the primrose will deck the mossy field,
The willow's little furry buds the daffodils will shield.
New life, new joys, new happiness, new love each day will bring:
I bid you make your heart rejoice in hope for sunny Spring."

This cheerful little warbler, dear, this happy, joyous bird,
Each morning ere the sun awakes his happy song is heard.
He fills each sad and lonely heart with hope of things to be—
I thank the thoughtful Being that has sped the joy to me.

—*Josephine Jo Antoncich.*

WEETAMOE PEAR TREE

Did Queen Weetamoe, proud Indian princess, seek the Outlook, her favorite camping ground, in Tiverton, because of the luscious fruit borne by the pear tree that bears her name, and still flourishes on the estate of Mrs. Richard Jackson Barker? The tree is as tall as a good-sized oak, and still produces quantities of excellent fruit. Nearly forty years ago a man then over seventy years of age



told Mrs. Barker that as a boy he frequently ate fruit from this tree. He remembered that when ten years of age, that is a century ago, he was "punished for taking pears from the tree on the Lord's day." The tree, as he recalled it, was as large when he was still a small boy as it appeared to be in 1885; and he told Mrs. Barker that his father, an old man "long since dead," had said "it was as large when he was a boy" as it was when the lad was punished. Thus the history of the tree goes back for probably a century and a half, and then the tree was large, unusually large for a pear tree.

Beneath Weetamoe pear tree, buried in the surface soil made by the annual falling of the leaves, were found a large number of fine arrow-heads, such as a queen might carry, and great quantities of clamshells. Within the shadows cast by its spreading branches is a granite seat or bench, of unhewn stone. Perhaps Weetamoe sat frequently upon this bench, holding court amongst her bronze followers, when she came hither annually to spend the summer, leaving her royal residence on the shores of Mount Hope Bay. The clam shells indicate that the Outlook was the scene of feasting in bygone days. From the stone bench Weetamoe might gaze out upon a panorama of river and landscape, a scene unexcelled in beauty, and still a favorite subject with artists, who find renewed delight in transferring parts of it to canvas. The Barker home stands upon the site of this primitive Indian camp.

When was the tree planted? Who placed the seed, or who thrust some scion from an older tree into this favoring ground? Nobody knows. Assuming that the tree was as large as tradition tells one hundred twenty-five years ago; that the tree for more than a century has withstood the lashing gales that sweep through the East passage and across the bay; that sometimes its branches, smashed in an unusual blow, have been replaced by this tree that still shows wonderful vitality, it may be that the tree was full grown in the period of King Philip's War, and that Weetamoe came to the Outlook to eat its fruit, to feast beneath its branches, to recline upon the stone bench, and to gaze with Indian eyes upon the rare beauty of the Seaconnet River. Who knows?

HEPATICA

When April awakens the blossom folk,
And bluebirds are on the wing,
Hepatica muffled in downy cloak,
Hastens to greet the spring.

Careless of cold when the northwind blows,
Glad when the sun shines down,
She opens her wrap, and smiling, shows
Her dainty lavender gown.

Her sisters are robed in pink, and some
Are in royal purple dressed,
And over the hills and fields they come,
To welcome the darling guest.

The children laugh as they pick the flowers,
And the happy robins sing;
For, blooming in chill and leafless bowers,
Hepatica means the spring.—*Anna Pratt.*

TREES THE WOODMAN SPARED FOR THREE CENTURIES

Few trees are so famous that when they come to die they are cut down to the click of the movie camera, yet that is what happened to two sycamores the other day in New York City. They were the trees in whose shade George Pope Morris is said to have written the well-known

"Woodman, spare that tree!
Touch not a single bough;
In youth it sheltered me,
And I'll protect it now."

The schoolboys and girls of some three generations, in the agonies of "speaking pieces" have had the lines embalmed in their memories, and the old poem flashed back to momentary interest in the press when the trees were cut down. "Not a single bough" was left untouched by the "woodmen" who cut the trees limb by limb to prevent their falling.

To the click of the movie camera the branches were cut, the boughs sawed and the trunks of the trees chopped. Only a pile of wood remains. They shaded the mansion in Old Chelsea in which a British General hid and from which he later escaped during Washington's occupation of New York. The place is now a girls' boarding house.

The trees were more than three hundred years old. They died two years ago, and could have been saved, according to an authority on trees, who said they were killed by lack of nutriment and neglect.

The poem, "Woodman, Spare That Tree," was inspired by an occasion on which a friend took Morris into the woods near Bloomingdale, New York, and pointed out an old elm under which he had played in youth. While they were examining the tree a man approached and was about to cut it down, when Morris's friend offered the workman ten dollars to spare it.

The three went into the woodman's cottage and Morris drew up a bond to the effect that the tree should be preserved during the friend's lifetime. So strong was the impression the incident made on Morris's mind that he commemorated it in verse which he wrote under the sycamores back of his home.—*Literary Digest*.

What conqueror in any part of Life's battle could desire a more beautiful, a more noble, or a more patriotic monument, than a tree planted by the hands of pure and joyous children, as a memorial to his achievements?—*H. J. Lossing*.

A WELCOME TO A WREN

Choose our oak tree, little wren,
Raise your blessed voice again;
Let us watch your sprightly brown
Tilt the budding tassels down,
Where each twig displays a leaf
Pink as any coral reef.

Soon your "search-for-lodgings" quest
Would be finished, if you guessed
That a home (we think inviting),
Waits approval—joy inciting;
Take a favorable peep,
. . . Here your babykins could sleep;

Or, awaking, watch the weather
And the hours play together
Games of joy and health and worth
With devoted Mother Earth;
Hide-and-seek with rain and sun,
While the brooks and breezes run;

Cheerful builder, heed our thought;
—We needing to be taught;
And you truly typify
Aspirations, sweet and high;
For your singing every day
Helps to carry care away;

Like a whiff of ocean air,
Bright as blue that sparkles there
Are your buoyancy and vigor,
. . . Potent, pleasant, constant, bigger,
Seem your aims and influence
Than most things of "consequence."—*Alice Crosby*.

LANGUAGE OF THE TREES

I heard the language of the *trees*,
 In the noons of the early summer;
 As the leaves were moved like rippling seas
 By the wind—a constant comer.
 It came and it went at its wanton will;
 And evermore loved to dally,
 With branch and flower, from the cope of the hill
 To the warm depths of the valley.
 The sunlight glow'd; the water flow'd;
 The birds their music chanted,
 And the words of the *trees* on my senses fell—
 By a spirit of Beauty haunted:—
 Said each to each, in mystic speech:—
 “The skies our branches nourish;—
 The world is good,—the world is fair,—
 Let us enjoy and flourish!”

Again I heard the steadfast *trees*;
 The wintry winds were blowing;
 There seem'd a roar as of stormy seas,
 And of ships to the depths down-going.
 And ever a moan through the woods was blown,
 As the branches snapp'd asunder,
 And the long boughs swung like the frantic arms
 Of a crowd in affright and wonder,
 Heavily rattled the driving hail;
 And storm and flood combining,
 Laid bare the roots of mighty oaks
 Under the shingle twining.
 Said *tree* to *tree*, “These tempests free
 Our sap and strength shall nourish;
 Though the world be hard—though the world be cold—
 We can endure and flourish.”—*Charles Mackay*.

TREES, SHRUBS AND VINES THAT ATTRACT AND FEED BIRDS

One of the best ways to increase bird population is to plant such vegetation as will appeal to the birds' appetite and help to feed the many hungry, gaping mouths. If you have but room for one tree, plant a Russian mulberry. No other one tree will attract so many different varieties of birds. Robins, tanagers, catbirds, orioles, thrushes, sparrows and many others flock to it. Birds are fruit hungry in the spring, and, as much of their natural food has been destroyed, they eat the cultivated fruit. The choke cherry is a good tree to plant. The fruit ripens from July to September, and is relished by flickers, cuckoos and robins. Here is a list of trees, shrubs and vines that will attract the birds:

Trees.—Russian mulberry, dogwoods, wild sand, black and choke cherries, hackberry, box elder, white thorn, white ash, red cedar, white spruce, pitch, white and Norway pine, and hemlock, mountain ash, European ash, balsam, fir.

Shrubs.—Elders, raspberries, blackberries, sumacs, juniper berries, service berries, holly berries, huckleberries, spice bush, haws, snow berries, shad bush, fever bush, barberry, cornels, dangleberry, black alder, privet, choke berry, buckthorn, swamp gooseberry, wild rose, thimbleberry, Indian currant, sorrowwood, sheep-berry and high bush cranberry.

Vines.—Wild grapes, Virginia creeper, bittersweet, moonseed, matrimony vine, clematis, honeysuckle and trumpet vine.

Herbaceous Plants.—Sarsaparilla, buckwheat, sunflower, Japanese millet, poke berry, wild rice.

OH WIDE, WIDE WORLD

1. Oh big round world, Oh wide, wide world, How won - der - ful you are. Your
 2. So ma - ny love - ly blossoms bloom, Up - on your am - ple breast, And
 3. Dear lit - tle child the God a - bove, Made me as well as you, The

o - ceans are so ve - ry deep, Your hills reach up so far.
 flow'r and leaf and tree and bud, In col - ors gay are drest.
 glo - rious sun, the shin - ing stars, Up in the heav'ns so blue.

Down thro' your val - leys wide and green, Such migh - ty riv - ers flow. Up -
 And are you such an old, old world, As all the peo - ple say? And
 And flow'r and leaf and bud and tree, The hill and val - ley too, The

on your great sky reach - ing hills, Such gi - ant for - ests grow.
 have you real - ly, real - ly lived, For - ev - er and a day?
 riv - er wide, the o - cean deep, Each has some work to do.

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 From *Songs of the Child World* by Alice C. D. Riley
 and Jessie L. Gaynor

Know ye why the Cypress tree as freedom's tree is known?
 Know ye why the Lily fair as freedom's flower is shown?
 Hundred arms the Cypress has, yet never plunder seeks:
 With ten well-developed tongues, the Lily never speaks!—Omar Khayyam.

THE DRUID CIRCLE IN QUINSNICKET WOODS

Professor William Gould Vinal, Rhode Island College of Education.

In ancient Celtic countries are found rude structures of stone which are thought to be the altars of the Druids. Often times a hundred youths would gather about these altars for instruction. All their communications were oral. The Druids held their meetings in the deep forest, especially in groves of oak. Every day was tree day with them. The trees, the stars, the earth, and the rocks were their favorite studies. The Druids also set forth and preserved the laws of the land. Their emblem was the egg of the serpent. The Druids were not only a learned class, but they had a code of ethics and were brave. It is said that before battle they would often throw themselves between two armies to bring about peace.

There is a Druid Circle in Rhode Island. It is older than the Druid altars of ancient Europe. The stones of the altar are larger than those ever moved by the hands of man. They were brought from the north by the great glacier and placed where one of our beautiful forests now grows. In this circle one may learn about the trees, the stars, the earth and the rocks. We know of no better place for Rhode Island youth to revive the ancient custom of tree worship.

These notes are suggestions for the gathering of modern clans. The clan may be a school, a scout troop, a neighborhood party, a family or just one person. The gathering braves should be divided into squads of 5 to 10 in each group. The group then elects its chief. The chief calls his clan to order and may arrange his tribe in a circle. When any member of the circle wishes to address the chief, he arises and stands silent. The chief recognizes him with a nod. The brave then says: "O Chief, I suggest the following name for our clan." This continues until agreed upon. Someone else then rises and when recognized says: "Oh Chief! I suggest that our tribe have the following emblem." If the tribesmen agree they say, "How! How! How!" in true Narragansett fashion. If they do not approve they show displeasure. Songs, and warwhoops are organized in the same way. Then comes the code of wood ethics. Someone says: "O Chief! I move that this tribe go on record as opposed to the scattering of rubbish, such as paper, tin cans, etc., in our forests." Someone else says: "O Chief! I would like to hear from the other warriors as to their opinions concerning the 'Grouch' who goes on a hike." Before disbanding the chief appoints the time and the place: "To-morrow morning, five hours after the sun has passed the horizon, I want my braves to meet the Grand Sachem (ordinarily known as teacher) in front of the big council house. Bring food to cook over the fire. We will take the white man's big caboose marked Woonsocket. And this takes us along the Louiquisset Pike to the Quinsnicket station."

The Grand Sachem, upon reaching Quinsnicket, calls for organization of the tribesmen. The tribes then march in order, trying a few warwhoops on the way, until they come to a sign which says: "Break Neck Hill Road." Enter the woods at this point. The tribe should leave the starting point five minutes apart and follow the trail, as blazed in this book.

Starting at the sign "Break Neck Hill Road" take the left-hand trail into the woods until you find a sign which reads, "To Quinsnicket Hill and Lake." Follow the arrow until you come to the view shown in picture 1. This a clump of gray birches. Observe the black patches below each limb. Note the limbs broken by the heavy ice storm of 1921. Why did the birches not break? Take the

extreme left-hand patch which leads past a glacial boulder to a clearing. On the north is a winding white road. It goes toward Lime Rock and the whiteness is due to the limestone soil. On the east you may look over the aspens and see Quinsnicket Lake. Look about for some evidence to prove to the Grand Sachem that you have seen Quinsnicket Lake as shown in picture 2. This will count as one honor for your tribe.

Now return to the gray birches. One trail leads across a glaciated ledge. Follow this until reaching view 3. Collect evidence of being here for another honor. Note the white quartz vein and the cap which has slid from place on one of the rocks. Your evidence must not be either of these two observations. The snow was still on the north of the rock when the picture was taken. Why?

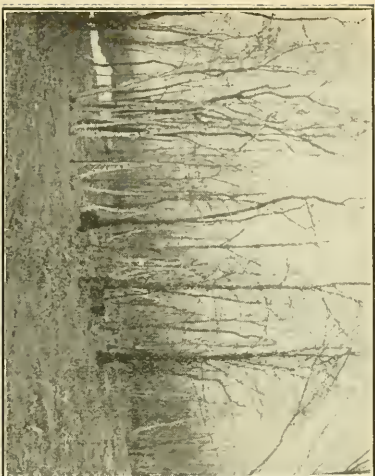
Your route from here is due south along a fire line. Make three observations about the fire line. If they are correct you win one honor point. Follow the fire line until it is crossed by a foot trail and then take this path east. Continue slowly and be on the look out for scenes 4 and 5. Scene 4 shows a group of chestnuts which have been attacked by the chestnut blight. This disease will probably exterminate our chestnut trees. Scene 5 is of three white oaks. The oak was the favorite tree of the Druids. Whatever they found growing on that tree they thought was a special gift from heaven. This is why they worshipped the mistletoe. You will find something growing on some of the oaks at Quinsnicket. See how many kinds of things you can find growing on the oaks from this place to Druid Circle. One honor will be given for every five specimens collected from an oak tree. Estimate, by pacing, how far apart the white oaks are from the diseased chestnut. One honor will be awarded for discovering these trees and giving a reasonable estimate of their distance apart. Hereafter, the number of honors for each certain thing will be indicated by a number in parenthesis.

Continue on this trail until coming to a cartway. Send several scouts to observe the chestnut stumps (picture 6). These chestnuts were cut down last winter. Why? (1). How old were these chestnuts? (1). How do you account for the peculiar shape of the stump? (1). In what year did this event take place? (1). Examine several stumps and determine from what direction the enemy came. Steal along the roadway in this direction.

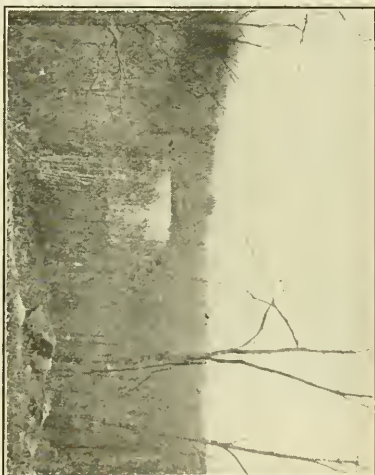


Quinsnicket Woods. Picture 7.

NATURAL BEAUTY REVEALED TO VISITORS TO QUINSNICKET WOODS.



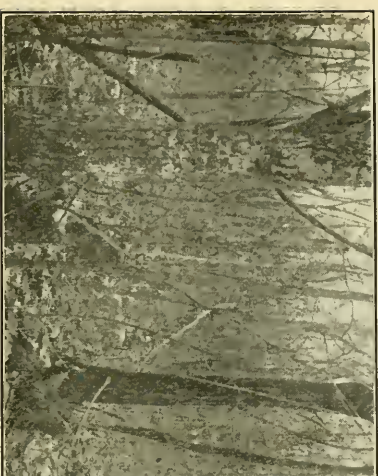
Grey Birches. Picture 1.



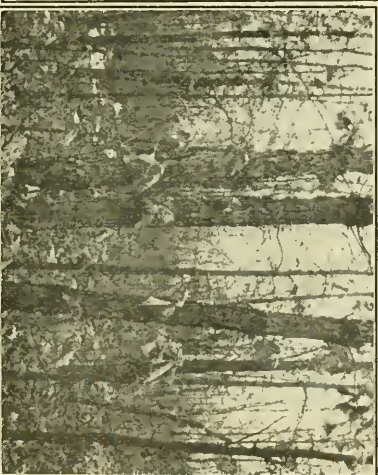
Quinsnicket Lake. Picture 2.



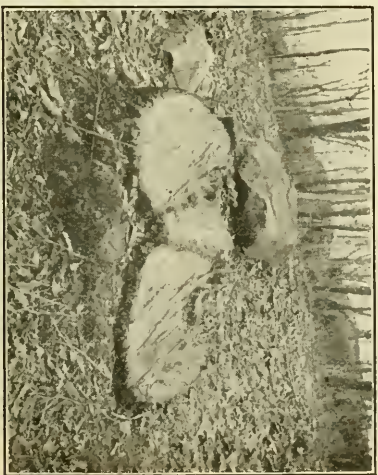
Glacial Rocks. Picture 3.



Chestnut Blight. Picture 4.



Three White Oaks. Picture 5.



Chestnut Stumps. Picture 6.



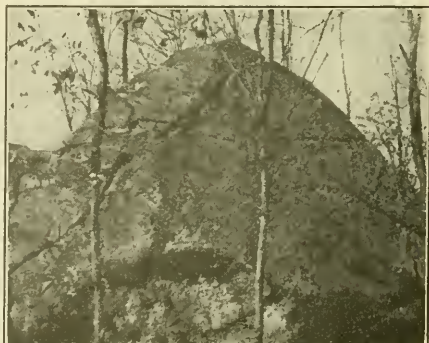
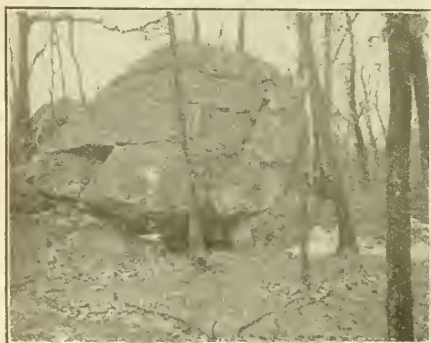
Druid Circle. Picture 8.

If your scouts made a correct report of their last skirmish you will soon come upon the view shown in picture 7. One great rule of woods ethics has been violated here. It is a common violation in the white birch region of New England. Report this in the council ring with a just reason as to its being poor ethics in the woods. (1). Estimate the amount of wood in terms of cords in the pile on the left. (1).

Continue on the same course until reaching a much-traveled road. This leads you directly to Druid Circle. You will first see this magic group as viewed in picture 8. You will now sit down for a rest and reckon up accounts. Add the honors and determine which tribe has proved to have the best woodsmen. You may now wish to continue to the Glen and cook in the fireplace or if you have an hour you may wish to have the leading tribe defend its title. If the challenge is made and accepted you may deposit your dunnage and prepare for the fray.

The Grand Sachem takes the middle of the council ring, and around the circle are the chiefs with their tribesmen in back. The Grand Sachem speaks:

"Fellow Narragansetts! The fact that you are here is due to your cleverness as scouts. The Wampanoags have shown the greatest skill. The Pequots doubt their superior ability and wish to continue the contest. In the old days such disputes were settled by the bow and arrow. To-day we are to settle this by prowess of brains and the knowledge of woodcraft. No one is to leave the circle until the sound of the Gourd.



Two of the Druid Circle Rocks. Pictures 9 and 10.

"You may now look at picture number 9. This is a glacial boulder. When the ice lowered it into place it came down onto smaller rocks. It was set there more than 10,000 years ago. The first team finding this rock and having all its members stand near the place where the camera man took the picture will have one honor. Your war cry will signify that you are there. You may start when I tap the Gourd. We will re-assemble here after discovering the particular spot mentioned."

Picture 10 is another member of Druid Circle. It is particularly interesting because the large even surface shown in the front of the rock shows where another rock has fallen away from it. This second rock is in this vicinity. The tribe surrounding this second rock first wins an honor. Three proofs must be given that it came from the rock in the picture.

Picture 11 is of a ledge which was smoothed and worn by the heavy ice sheet. It extends in the direction in which the glacier travelled. At the southern end of



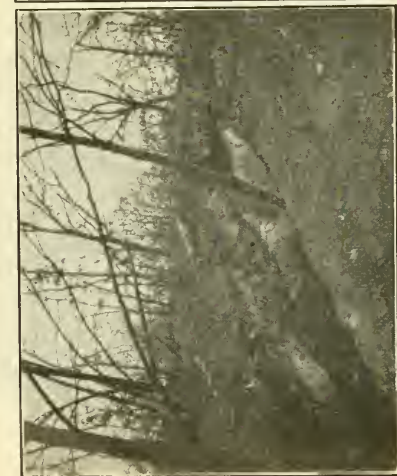
Ledge Worn by Glacial Ice. * Picture 11.

the continuation of this ledge is a red cedar which has had a misfortune. What was the mishap? Your proof of finding this tree will be a correct report as to what limb has become the new leader (one honor). Your report must be in within 10 minutes for the honor. Trees, like birds or people, upon losing a leader, develop a new one.

Picture 12. The first person standing where the camera was when this picture was snapped wins an honor for his tribe. The picture must be carried in the mind. Any scout taking the printed picture along forfeits the honor that he may win. Do the same for picture 13 and for picture 14.

Picture 15. This boulder shows a quartz vein. A fire has been built near it and the intense heat has chipped off some of the rock. The tree in the picture is a black locust. The scout finding it first wins an honor for the tribe.

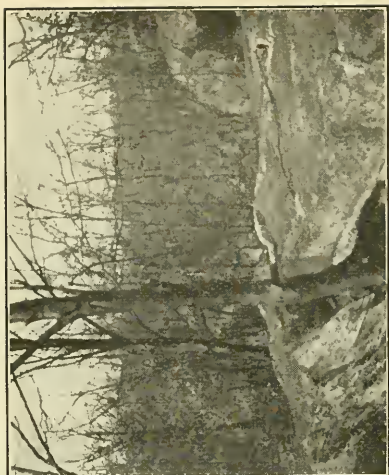
Picture 16. This is an illustration of what the lumberman calls coppice reproduction, i. e., growth from the stump. When the white man came to America the majority of our trees had grown from seed. To-day the majority of our hard woods have come as sprouts from a stump. The tribe first finding this cluster of chestnuts and bringing a fairly accurate report of the size of the original chestnut receives one point.



Out of the Ledge. Picture 12.



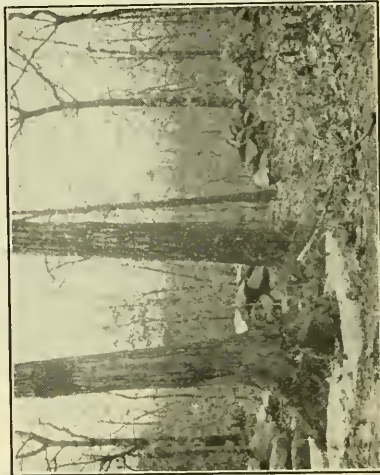
Cleft for Ages. Picture 13.



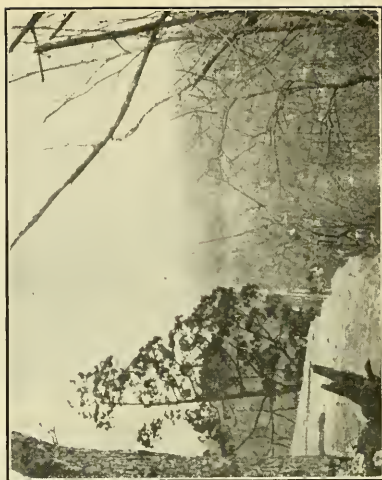
Tree vs. Rock. Picture 14.



Boulder Showing Quartz Vein. Picture 15.



Coppice Reproduction. Picture 16.



Where the Glacier Dropped. Picture 17.

Beyond this chestnut is an abandoned road on the right. Follow this road until it comes to an old fence. This will require more ingenuity than the other explorations. What kind of a fence is it? (1). Take one leaf of the vine that grows on this fence. What kind of a leaf is it? (1). In what way do trees tell where this road used to be? (1). How do the rocks guide you? (1). Carefulness rather than quickness is the keynote to success in this instance. You may report back to the circle in twenty minutes. Any team not in place when the whistle is blown will not receive credit.

Rhode Island has many beautiful views. Picture 17 is one of them. It is at the end of a formation similar to picture 11. You may wish to recall what you were told about Number 11. Across the valley from this viewpoint is the northern slope of a hill. We know that it is not a southern exposure because the white snow may be seen through the trees. In order to take this view the camera stood beside the white oak which is shown in the picture. Less than ten feet away is the first "thing" to have been seen on top of this ledge after the glacier retreated. The scout first laying claim to this "thing" wins an honor for his tribe.

We may now take our second rest. While we sit here and take in the beautiful view we can have a tribal song contest. Or perhaps the Grand Sachem will tell a story about the early Narragansetts. And as the twilight and dusk comes up the valley we will pick our belongings and leave Druid Circle as we found it—enshrouded in the mysteries of the past—and dawning on the morrow with new problems for other scouts.

THE LITTLE TREE

When Miss October came around
To dye the dresses of the trees
The usual autumn tints, she found
The whole of Woodville hard to please.
The maple wept, "I don't like these—
I'll have a purple frock, I think."
The oak would black and white put on;
And beech and poplar smiled to don
A brilliant hue of salmon pink.

Only the little cedar stood
Content, nor lifted up her voice
While fumed and fdgeted the wood.
In all her life she'd had no choice
Of tint and shade; no season gave
A gaudy robe for her to wear;
Yet, uncomplaining, true and brave,
Year in, year out, she might be seen,
A slender figure standing there
Clad in quiet suit of green.

Waiting to let their fretting pass
Awhile October lingered nigh;

And then, alas for dreams! alas
For hope of gorgeous finery!
One night she put her patience by;
More quickly than it takes to tell,
Sharp, unexpected, biting down,
The frost of her displeasure fell.
And bright mid-Autumn wondered, sad,
To find her pretty favorites clad
In livery of sober brown.

Only the cedar stayed the same,
Sturdy, green-robed; and on a day
A wonderful procession came
And bore her laughingly away
And lo! she saw herself made gay
With sparkling chains and shining rings
With silver bells and balls of gold,
And lights and sweets and beauteous things.
And in her hands dear dolls to hold.
And drums and trumpets at her side,
And loving gifts upon her breast;
And, circling close, of all the best,
Glad children with their arms held wide.

—St. Nicholas.

City children will form habits of industry and regularity by utilizing their energies on the back yards and vacant lots that are now largely unproductive. School supervised home gardening requires only a limited amount of school time but it should have as definite a place and credit as any other school subject. As a practical out of school hour subject, gardening admits of the widest kind of correlation with other studies. There is no school subject from which more real knowledge can be gained of science, of art, of life's relations than from dealing with living, growing plants.—*School Century*.

HOME, SWEET HOME.

John Howard Payne.

Sicilian Air.

Moderato.

1 { Mid pleas - ures and pal a ces though we may roam,
Be it ev - er so hum ble, there's no place (Omit. . .)
2. { An ex ile from home, splendor daz zles in vain,
Oh! give me my low - ly thatch'd cot tage (Omit. . .)

like home; } { A charm from the skies seems to
a gain; } { Which, seek thro' the world, is ne'er
The birds sing - ing gai ly, that
Give me these, with the peace of mind

hal low us there, Omit. } Home, home, —sweet, sweet home! There's
met with (Omit. . .) else-where; }
came at my call—
dear - er (Omit. . .) than all. }

no place like home, There's no place like home.

3 How sweet 't is to sit 'neath a fond father's smile,
And the cares of a mother to soothe and beguile.
Let others delight 'mid new pleasures to roam,
But give me, oh! give me the pleasures of home!

REFRAIN.

4 To thee I'll return, overburdened with care,
The heart's dearest solace will smile on me there.
No more from that cottage again will I roam,
Be it ever so humble, there's no place like home.

REFRAIN.

SELECTIONS FOR CHILDREN

Contributed by Miss Gertrude F. Evans, Rhode Island College of Education, '22.

What is the secret the pine-trees know
That keeps them whispering, soft and low?
All day long in the breezes swaying,
What can it be they are always saying?

—Jennie G. Clarke.

"Crocus! purple crocus!
Rouse from slumber deep!
Mayflowers? rosy mayflowers!
Wake up out of sleep!"

—Mary F. Butts.

I'm the oriole; see how gayly I'm dressed,
For me the blossoming orchard is best.—Annie Chase.

The robin in the cherry tree
Is blithe as any bird can be,
And bubbling from his silver throat,
His wordless songs of rapture float.

—Eben E. Rexford.

The trees are full of crimson buds
And the woods are full of birds;
And the water flows to music
Like a tune with pleasant words.

Nathaniel P. Willis.

Spring hangs her infant blossoms on the trees,
Rock'd in the cradle of the western breeze.—Cowper.

DOWNY WOODPECKER

Downy came and dwelt with me,
Taught me hermit love;
Drilled his cell in oaken tree
Near my cabin door.

Architect of his own home
In the forest dim,
Carving its inverted dome
In a dozy limb.

Carved it deep and shaped it true
With his little bill;
Took no thought about the view,
Whether dale or hill.

—John Burroughs.

"Almost time for the skies to grow bluer,
And breezes to soften, and days to grow long."

NUTHATCH

The busy nuthatch climbs his tree,
Around the great bole spirally,
Peeping into wrinkles gray
Under ruffled lichens gay,
Lazily piping one sharp note
From his silver mailed throat.

—Maurice Thompson.

How do the robins build their nests?
Robin Redbreast told me,
First a wisp of amber hay
In a pretty round they lay,
Then some shreds of downy floss,
Feathers, too, and bits of moss,
Woven with a sweet, sweet song,
This way, that way, and across,
That's what robin told me.

—George Cooper.

"Heigh ho! daisies and buttercups,

Fair yellow daffodils, stately and tall!

When the wind wakes how they rock in the grasses.

And dance with the cuckoo-buds slender and small!"

The oak is called the king of trees,
The aspen quivers in the breeze,
The poplar grows up straight and tall
The pear tree spreads along the wall;
The sycamore gives pleasant shade,
The willow droops in watery glade,
The fir tree useful timber gives,
The beech amid the forest lives.

—Sara Coleridge.

The robin, the forerunner of the Spring,
The bluebird with its jocund carolling,
The restless swallows building in the eaves,
The golden buttercups, the grass, the leaves,
The lilacs tossing in the winds of May,
All welcome this majestic day.—Longfellow.

"The birds sing out from each tree and bush;
The violets listen with fragrant hush,
Oh, everything that's sleeping still, awake!
awake!
To life and spring-time awake."

"Tis sweet, in the green spring,
To gaze upon the wakening fields around,
Birds in the thicket sing,
Winds whisper, waters prattle from the ground,
A thousand odors rise,
Breathed up from blossoms of a thousand dyes."

"How dreary would the garden be,
With all its flowery trees,
Suppose there were no butterflies,
And suppose there were no bees."

"Almost time for the pretty white daisies
Out of their sleep to awaken at last.
And over the meadows with grasses and clover,
To bud and to blossom, and grow so fast."

"Come show your pretty heads!
The spring is coming, you see, you see."
For so sings he.
The Chickadee-dee!—Sidney Dayre.

What are the voices of birds
But words, our words,
Only so much more sweet?
—Robert Browning.

DANDELION

"Cheerful, jaunty little fellow,
With your tousled head of yellow,
Wandering 'long the road you're seen
In your ragged coat of green.
Tireless messenger of Spring,
Your journey starts when bluebirds sing,

Nor ends 'till crouched against some wall,
You mock the blustering winds of Fall.
One day youthful, glad and gay,
The next we find you old and gray.
Do you have a fairy wand?
Naughty little vagabond!"

IN MAY

In May, the world is wide,
No leafy curtains hide
The rim of any hill,
Save where the willows lean,
Mantled in yellow green,
Above the swollen rill
That nightly showers fill
In May.

In May the world is sweet
With blossomy, dim retreat
In perfume laden vales;
In tamarack marshes wet
The white, white violet
Its fragrant breath exhales;
Thorn-apples scent the dales
In May.

In May the world is young,
Youth of the year is sung
By many a golden throat;
The cat-bird's varied lay,
Wren-songs at break of day,
The reeling's thrilling note
And mourning dove remote,
In May.

In May the world's alive
Crowding at every hive
Are pollen-freighted bees.
The robin's tawny breast
Rounds out her cup-like nest
In sheltering cedar trees,
And orioles court the breeze
In May.

—H. A. L. in *Chicago Tribune*.

CITY TREES

The trees along the city street,
Save for the traffic and the rains,
Would make a sound as thin and sweet
As trees in country lanes.

And people standing in their shade
Out of a shower, undoubtedly

Would bear such music as is made
Upon a country tree.

Oh, little leaves that are so dumb
Against the shrieking city air,
I watch you when the wind has come—
I know what sound is there.

—Edgar St. Vincent Millay.

ARBUTUS

Last night at dusk it came to me;
I heard the postman's strident ring,
Then found this wonder and delight—
A fragile, fragrant box of spring!

Pale blossoms from the northern woods,
Elusive pink or lustrous green,
As delicate as butterflies,
All iridescent glow and sheen.

Cool fragrance from the northern woods,
How may a mortal understand
The mind that dreamed you into life,
Then laid your beauty in my hand!

Oh, I remember hills and woods,
And perfumed winds that wildly blow
Across the purple mountain tops,
And song of wind and river's flow;

And I remember melodies,
The lilting joys that laugh and sing,
Young Love in April, unafraid,
Awake and bent on blossoming!

A magic wand has waved for me;
I see the wood, the fairy ring,
And then, pink, fragile, like a bride,
The lovely, luring Soul of Spring!

—Elizabeth Newport Hepburn.

PRETENDING

I know a magic woodland, where there's a fairy ring,
Where little tunes go tripping to whirl of elfin wing.
There all the oaks and beeches, proud swaying in the breeze,
Are really fairy princes pretending to be trees.
I know a magic moorland with wild winds drifting by,
With pools among the heather that mirror half the sky,
And ferns that catch the sunlight whichever way it turns—
They're fairy ladies pretending to be ferns.—George M. Dowling.

IN COMMON THINGS

Seek not afar for beauty. Lo! it glows
In dew-wet grasses all about thy feet;
In birds, in sunshine, childish faces sweet,
In stars, and mountain summits topped with
snows.

Go not abroad for happiness. For see!
It is a flower that blossoms by thy door.
Bring love and justice home; and then, no
more,
Thou'lt wonder in what dwelling joy may be.

Dream not of noble service elsewhere wrought;
The simple duty that awaits thy hand
Is God's voice uttering a divine command;

Life's common deeds build all that saints have
thought.

In worder-workings, or some bush aflame,
Men look for God, and fancy him concealed;
But in earth's common things he stands re-
vealed;
While grass and flowers and stars spell out his
name.

The paradise men seek, the city bright
That gleams beyond the stars for longing eyes,
Is only human goodness in the skies,
Earth's deeds, well done, glow into heavenly light.

—Minot Judson Savage.

TREE SURGERY: GRAFTING

Grafting is the art of uniting parts of two different plants. A scion is a portion cut from a plant to be inserted upon another (or the same) plant, with the intention that it shall grow. The best time for most grafting is after the leaves have fallen, but before severe freezing begins. Scions should be tied in bunches and buried in moist sand, where they will not freeze and yet will be kept cool enough to prevent growth. Scions should be about the size of a lead pencil. The stock is the part upon which the bud or scion is inserted.

CLEFT GRAFTING

In cleft grafting a branch one and one-half to two inches in diameter is severed carefully with a saw. Split the exposed end with a broad thin chisel or grafting tool (Fig. A). Then with a wedge, or the wedge-shaped prong of the end of the grafting tool, spread the cleft so that the scions (Fig. B) may be inserted as in Fig. C.



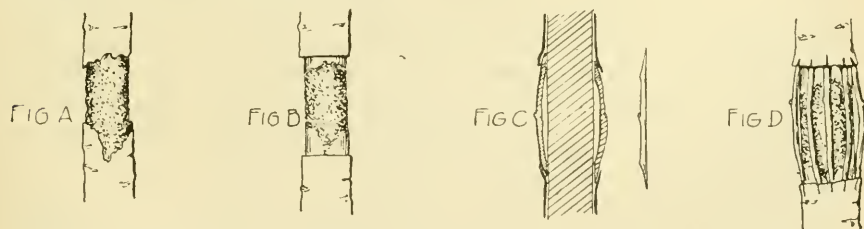
To insure good results the scions should consist of a portion of the previous season's growth and should be long enough to have two or more buds. The lower end of the scion should be cut in the shape of a wedge, having the outer edge thicker than the inner (Fig. D). This is done so that pressure comes on the outer growing parts of both the scion and stock. Generally the lowest bud of the scion should come about at the top of cleft.

It is of very great importance that the cambium layer, which is the moist tissue between the bark and the wood, of both scion and stock come in close contact. The cambium layer is the vital part of the stem. Its cells are the most active and contain the germ of reproductive plasm.

All cut surfaces are now covered with grafting wax to preserve and prevent evaporation of moisture from the growing cells. It also helps to hold the scions in place, Fig E.

BRIDGE GRAFTING

A bridge graft is made by using scions, or small limbs, to connect or bridge over two portions of a stock which have become separated through some injury such as girdling by mice or rabbits (Fig. A).



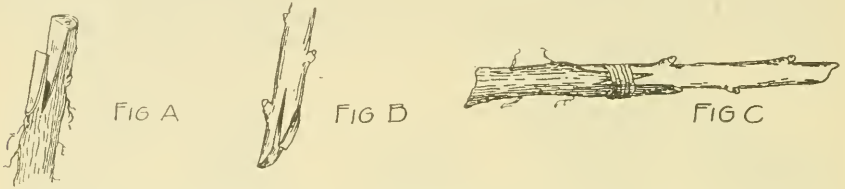
The injury should be carefully cleansed and all dead parts cleared away. The wound should then be washed with a solution of copper sulphate or some other antiseptic. The rough edges of the bark should be trimmed evenly as shown in Fig. D.

Wood of the previous season's growth should be chosen for the scions and should be a trifle longer than the space to be bridged, so that the middle portions should arch slightly as in Fig. C. The ends should be beveled, as shown, by

making a long thin cut. Slight cuts made in the bark at the point where the scions slip under will be of considerable help. The union of scion and tree will only occur when the layers of cambium are placed in close contact. The number of scions to be used depends upon the size of the trunk. The wound should now appear as in Fig. D. Cover the area about the ends of the scions and about the margin of the wound with grafting wax to prevent drying out.

TONGUE GRAFTING

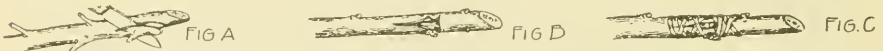
Tongue or whip grafting is used extensively in root grafting. It can be done on trees as young as one or two years of age and may be done indoors during the winter.



The scion and stock should be about the thickness of a lead pencil and from two to five inches long. Cut the stock diagonally with one stroke of a sharp knife, leaving about three-quarters of an inch of cut surface as shown in Fig. A. Place the knife about one-third of the distance from the end of the cut surface at right angles to the cut, and split the stock in the direction of its long axis. Cut the lower end of the scion to match Fig. B. Fit the two split ends into each other in such a way as to cause the cambium layers to meet at the surface. The joint should now be wrapped with five or six turns of waxed cord (Fig. C). The graft should be planted so as to bring the union of stock and scion not far below the surface of the ground.

BUDDING

Budding is a form of grafting and is a very economical method. The operation is simple and can be quickly done. The bud or shield is cut as shown in Fig. A so that the stem of each leaf is left to help push the bud under the bark of the stock.



The stock should be about the size of a pencil. Buds are usually inserted as near the ground as possible. The cut is T-shaped (Fig. B), and is made nearly at right angles to the stock. The stem of the T is cut about one inch long. The flaps of the bark are slightly loosened and the bud grasped by the leaf stem and pushed firmly into place. A strand of raffia, eight or ten inches long, is now tied around as shown in Fig. C. This bandage should be removed as soon as the buds have united with the stock to prevent girdling.

A good grafting wax can be made as follows: Four parts resin, two parts beeswax, one part, by weight, of tallow or linseed oil. Break up fine and melt, then pour into a vessel of cold water. As soon as it is cool enough to handle it should be worked until tough. Grease hands.—*Industrial Arts Magazine*.

I am a blue-bird; on branches bare
I love to sway like a blossom fair,
And sing to people tired of snow
The prettiest songs of spring-time I know.—*Annie Chase*.

ARBOR DAY ALPHABET

Class Exercise for Small Children

- A is for apple tree, sweet with bloom,
Or laden with golden fruit.
- B is for beech, with thick, cool shade.
And the birches of ill repute.
- C is for chestnut and cedar fair,
And cypress, where sorrows abide.
- D is for dogwood, whose fair white tents
Are pitched by the riverside.
- E is for elm, New England's pride:
True patriot's love they stir.
- F is for fig tree of the South,
And the cone-shaped northern fir.
- G is for gum tree, so well known
To the southern girls and boys.
- H is for hemlock, steadfast tree,
And for holly with Christmas joys.
- I is for ironwood, firm and strong,
And the ivy that twines around.
- J is for juniper, low and green,
Where the purple berries are found.
- K is for the king of the forest grand,
The oak must wear the crown.
- L is for thorny locust, the larch,
And the linden of fair renown.
- M is for maple, favorite one,
The queen of all the trees.
- N is for Norway pine, which still
Is whispering to the breeze.
- O is for orange, blooming for brides,
And for olive, yielding rich oil.
- P is for poplar, reaching high,
And the palm of the southern soil.
- Q is for quince, in our gardens low,
With its fruit so sour and green.
- R is for redwood, giant trees.
The largest that can be seen.
- S is for spruce, bright evergreen,
And the silvery sycamore.
- T is for tulip tree, broad and high,
With its beautiful tulip-like flower.
- U is for upas, tropical tree,
With its fabled poisoned air.
- V is for vines that cling to the tree.
For friendship, strength, and care.
- W is for walnut, dark and firm,
And for willow, faithful and true.
- X is xanthoxylum, bitter bane,
Whose virtue is strengthening power.

Y is for yew tree, dwelling alone,
 Friendless and sad we know.
 Z is for zenith, the point above,
 Toward which the trees all grow.—*Ada S. Sherwood.*

WHAT THE TREES TEACH US

Class Exercise

FIRST PUPIL

I am taught by the Oak to be rugged and strong
 In defense of the right; in defiance of wrong.

SECOND PUPIL

I have learned from the Maple, that beauty to win
 The love of all hearts, must have sweetness within.

THIRD PUPIL

The Beech, with its branches wide spreading and low,
 Awakes in my hospitality's glow.

FOURTH PUPIL

The Pine tells of constancy. In its sweet voice -
 It whispers of hope till sad mortals rejoice.

FIFTH PUPIL

The nut-bearing trees teach that 'neath manner gruff,
 May be found as "sweet kernels" as in their caskets rough.

SIXTH PUPIL

The Birch, in its wrappings of silver gray,
 Shows that beauty needs not to make gorgeous display.

SEVENTH PUPIL

The Ash, having fibers tenacious and strong,
 Teaches me firm resistance, to battle with wrong.

EIGHTH PUPIL

The Aspen tells me with its quivering leaves,
 To be gentle to every sad creature that grieves.

NINTH PUPIL

The Lombardy Poplars point upward, in praise.
 My voice to kind Heaven they teach me to raise.

TENTH PUPIL

The Elm teaches me to be pliant yet true;
 Though bowed by rude winds, it still rises anew.

ELEVENTH PUPIL

I am taught generosity, boundless and free,
 By the showers of fruit from the dear Apple tree.

TWELFTH PUPIL

The Cherry tree blushing with fruit crimson red,
 Tells of God's free abundance that all may be fed.

THIRTEENTH PUPIL

In the beautiful Linden, so fair to the sight,
 This truth I discern: It is inwardly white.

FOURTEENTH PUPIL

The firm-rooted Cedars like sentries of old,
 Show that virtues deep-rooted may also be bold.—*Helen O. Hoyt.*

THE TREE AS A LIVING THING; A PLEA FOR REFORESTATION

To the man who is familiar with tree life it might seem almost superfluous to emphasize the fact that a tree lives, and yet the average man, unfortunately, looks upon the tree as an inanimate and more or less useful accident on the face of the earth. And yet the tree lives—it breathes. It has a real circulation. The tree digests its food and assimilates it. It has processes that are just as real and beautiful as in any other form of life. It has the power to adapt itself to its environment. To be sure, it lacks intelligence and a nervous system and the power of locomotion. But in all the other elemental processes the tree functions just as truly as man himself.

LIFE PROCESSES OF TREES

The tree breathes through the leaves chiefly, and to a small extent through the tiny lenticels in the young bark. The air is taken into the leaf in just as real a sense as it is taken into the human lungs. It enters through the many microscopic openings on the underside of the leaf. There on the inside of the leaf the elements of the air are separated. The carbon is absorbed and is used in the building process. The oxygen is given off again to enrich the air for the benefit of all animal life.

The circulation in the tree is just as real as in the human body. It does not move so fast nor move round and round in response to heart action. Yet it does move and goes from the tiniest root hairs way down underground up to the leaves and back again all the way to the roots again. On the upward flow the circulation proceeds through the sapwood, traveling from cell to cell, from the small roots to the large ones, into the trunk, and from there to the large branches, and then through the smaller ones to the leaves. From the leaf, where it undergoes the necessary chemical changes to transform it into tree food, it travels downward through the cells of the inner bark all the way to the smallest roots, building the cambium layer as it goes.

The digestive processes of the tree take place in the leaf. There the entire food material, brought up from the roots in the sap, is spread out among the tiny cells of the marvelous leaf structure, and, under the influence of the sunlight, is combined with the carbon extracted from the air and is transformed into tree food—digested, as we call it in animal life. This digested tree food is assimilated into the entire growing parts of the tree in the downward flow through the cells of the inner bark, from which the cambium layer is built and all growth takes place.

ADAPTATION OF TREES

The tree adapts itself to its environment to an amazing degree. Where trees are thick they grow tall to reach the sunlight. Where two or more trees grow close together, it grows on one side to accommodate its fellows. When it grows in rocks, it sends its roots into almost impossible places in search of food and anchorage. It often sends its roots hundreds of feet in search of water, and the roots travel back and forth among the many obstacles toward their destination.

All life has two primal purposes of existence—one is self-preservation and the other is reproduction. The tree subscribes to both and is governed by both. It undergoes a constant battle for life from the time of its advent until the end. It must battle against the tremendous winds, against drought, against insect enemies, and deadly diseases; and now it must battle against man himself, who is the most destructive, the most thoughtless and inconsiderate enemy that the tree has encountered. Indeed, it has a lifelong struggle for self-preservation.

THE LEAF, AS A VITAL FACTOR

The leaf is probably the most wonderful, and is certainly the most vital and

indispensable factor in the world of living things. Without the leaf all life must perish. It is the one and only connecting link between the organic and inorganic worlds. It is the only thing capable of transforming the various mineral elements into available food material for both plant and animal. The only minerals that man can take into his system and use are water and salt, but he can use only a limited quantity of these. Every other element of food must come to him either directly or indirectly through the leaf.

Every grain, every fruit, every vegetable food product, every foot of lumber, and every other vegetable product that is used for the pleasure and profit of man is made in the leaf. And thus we see that the great God who created the world and life that inhabits it, made of the lowly leaf the greatest and most wonderful instrumentality of that life.

ENEMIES OF TREES

Perhaps the most insidious and persistent enemy of the tree is the group of diseases called fungi, which attack any exposed portion of woody tissues and start to grow by consuming the wood cells. A fungus disease exists in a decaying tree—it produces the decay. The fungus is a parasite—a low form of vegetable life. It lives by destroying some other form of life. That which attacks the living tree destroys the interior cells and persists until the tree is consumed. What we call decay is only the result of an active disease which consumes the woody interior that constitutes the structural strength of the tree.

The interior of a tree is often referred to as the heart or heartwood. This conveys an entirely wrong impression. The vital parts of a tree are the leaves and roots, the bark and cambium, and outer layers of sapwood. It is the outside layers of sapwood which are the most active, and each succeeding layer inward toward the center becomes less and less active until those near the center become practically dormant.

WASTE AND THE FUTURE

There is one more phase of the whole tree question that ought to be hit a smashing blow. America must wake up and reforest or America will rue the day of her spendthrift debauch. The early settlers sent back word that they had discovered a land of inexhaustible fertility. Americans of succeeding generations have proceeded on the theory that all the God-given assets of the nation were inexhaustible. We have destroyed with prodigal waste more and more of the native woodlands—the timber supply. We have done exceedingly little replanting. We are consuming the principal of our inheritance just as fast as a reckless unconcern will permit.

Where will the future lumber supply come from? Where will we get the wood pulp for print paper? We are sweeping away the God-given forests and building great cities with breathless haste. We say we are creating wealth. We are merely transforming it on the one hand and destroying it on the other.

Take a daylight ride across the Alleghenies and look at the denuded mountains! Contemplate the devastation that man, selfish and thoughtless man, has wrought! And then, when you realize what all this prodigal destruction means to the future of America, let your soul shudder at the thought of the future condemnation that awaits us from generations yet unborn. We who revel in our false wealth and unpardonable profligacy must answer to the God of nations and the children whom we bring forth to struggle in an impoverished land.

AMERICA MUST REFOREST

Men and women of America, we cut down the great forests that blessed this country. We allow the remnants to be burned over and vegetation destroyed.

The rains pour down water, and, instead of being held in check by the loose and porous soil in the network of roots, it rushes down over the hillsides and carries with it the fertile soil, leaving in its wake barren hills and deep ravines.

Thus we have alternating floods and droughts. The fertile soil is gone, the product of hundreds of years of nature's providence. The little springs that come from water held in check and feed the lakes and streams must gradually diminish and, I greatly fear, cease to exist in large part.

This question of reforestation is of monumental importance. America cannot continue to exist as a virile, forward-moving nation unless we protect what we have and start to build up that which we have so ruthlessly destroyed. We cannot afford to be a nation of vandals much longer. America must reforest, or America must drink the bitter dregs of national decline and impotency. —*Hon. Martin L. Davey, M. C., in the House of Representatives, March 3, 1921.*

OUT IN THE FIELDS WITH GOD

The little cares that fretted me,
I lost them yesterday
Among the fields above the sea.
Among the winds at play;

Among the lowing of the herds,
The rustling of the trees,
Among the singing of the birds,
The humming of the bees.

The foolish fears of what may happen,
I cast them all away
Among the clover-scented grass,
Among the new-mown hay;

Among the husking of the corn,
Where drowsy poppies nod,
Where ill thoughts die and good are born,
Out in the fields with God.

—*British Weekly.*

Forestry is of greater consequence to the young people that it is to us older men, anyhow, for the coming timber scarcity is even more threatening to them than it is to us. It will be at its worst when they are running the state and the nation.—*Gifford Pinchot.*

BUILDING THE NEST

They'll come again to the apple tree,
Robin and all the rest;
When the orchard branches are fair to see,
In the snow of the blossoms drest;
And the prettiest thing in the world will be,
The building of the nest.

Weaving it well so round and trim,
Hollowing it with care;
Nothing too far away for him,
Nothing for her too fair;

Hanging it safe on the topmost limb,
Their castle in the air.

So come to the trees with all your train
When the apple blossoms blow,
Through the April shimmer of sun and rain
Go flying to and fro;
And to our hearts as we watch again
Your fairy building grow.

—*Margaret E. Sangster.*

Here are the woods in whose soft echoing trees
The birds sing sweeter: here the rounded hill
Where sunning in the wild flowers merry bees
Pack full their wallet for the fragrant still.

—*Roy Moldrum.*

"A little of thy sturdiness,
Rounded with leafy gracefulness,
Old oak, give me,
That the world's blast may round me blow;

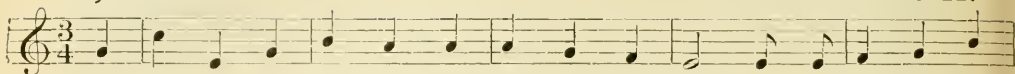
And I yield gently to and fro.
While my stout-hearted trunk below,
And firm-set roots unshaken be"

There is the crop of sweet and tender reminiscences dating from childhood and spanning the seasons from May to October, and making the orchard a sort of outlying part of the household. You have played there as a child, mused there as a youth or lover, strolled there as a thoughtful sad-eyed man—Your father, perhaps, planted the trees, or reared them from the seed, and you yourself have pruned and grafted them, and worked among them, till every separate tree has a peculiar history and meaning in your mind.—*John Burroughs.*

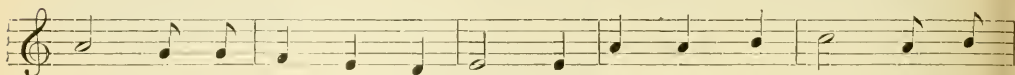
THE TREE.

B. BJÖRNSON.

EMORY P. RUSSELL.



1. The Tree's ear - ly leaf - buds were burst - ing their brown, "Shall I take them a -
2. The Tree bore the blos - soms and all the birds sung; "Shall I take them a -
3. The Tree bore his fruit in the mid - sum - mer glow; — Said the girl, "May I



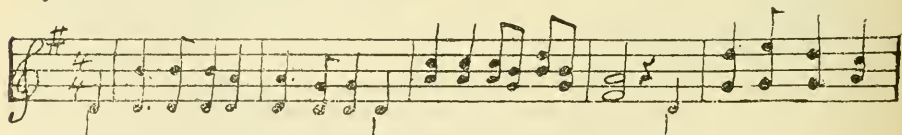
way?" said the frost sweep - ing down. "No, leave them a - lone, till the
 way?" said the wind as he swung. "No, leave them a - lone, till the
 gath - er thy sweet ber - ries now?" "Yes, all thou cans't see, take them,



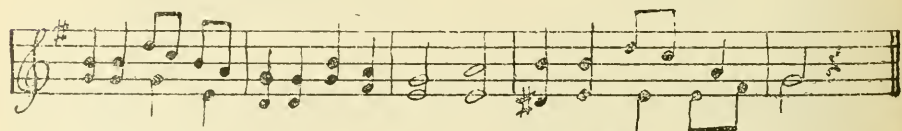
blos - soms have grown." Prayed the Tree, while he trem - bled from root - let to crown
 ber - ries have grown." Said the Tree, while his leaf - lets all quiv - er - ing hung.
 all are for thee," Said the Tree, while he bent down his la den boughs low.

NATURE'S PRAYER.

JOHN GREENLEAF WHITTIER.



1. The harp at Nature's advent strung Has never ceased to play; The song the stars of
2. The mists above the morning rills Rise white as wings of prayer; The al - tar cur - tains
3. The blue sky is the temple's arch, Its transept earth and air, The mu - sic of its
4. So nature keeps the reverent frame, With which her years be - gan, And all her signs and



morning sung Has never died a - way, Has nev - er died a - way.
 of the hills Are sunset's pur - ple air, Are sun - set's pur - ple air.
 starry march The chorus of a prayer. The cho - rus of a prayer.
 voices shame The prayerless heart of man, The prayerless heart of man.



—Photo by Avis A. Hawkins.

Oh for a seat in some poetic nook,
Just hid with trees and sparkling with a brook.—*Leigh Hunt.*



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